# CONTRACTURE OF THE BLADDER-NECK AND OTHER OBSTRUCTIONS THEREAT, EXCLUSIVE OF PROSTATIC HYPERTROPHY AND CANCER, AND THEIR TREATMENT.

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While the literature deals admirably and abundantly with pathology, symptoms, and the classic Young's Punch operation, there are quite a considerable percentage of cases which present anatomical features and technical difficulties that require separate consideration from a surgical standpoint. It is not necessary to go over the pathologic anatomy or the symptoms except to state that there is in all a bar, a tight collar or a firm, hard, fibrous non-dilatable ring.

This means residual, stasis, back-pressure, infection, pyelonephritis, partial or intermittent retention—any or all—in fact prostatism sans prostate. Urologists the world over have devised methods, as the Bottini Operation—or the Chetwood improvement—and several others, to deal with this pathologic condition. It remained for Young with his characteristic genius to evolve the "Punch." The "Punch" operation, however—like all other good things—has its drawbacks. Sometimes the bar is thin and so very well defined that bleeding is slight; but usually there is a considerable bleeding for the first forty-eight hours, bladder tenesmus, and a very high temperature from the second or third to the sixth day in most cases. A large woven silk catheter—indwelling—from size 24 Charriere to 28 Charriere is necessary to prevent blood clots forming and being retained in the bladder. Being stiff and firm such a large catheter almost always causes suffering, frequently extreme. Of course continuous irrigation through a two-way catheter was practiced for a long time by every one. I had one patient—a carcinoma case—with an electrically heated and automatically regulated apparatus for eight days under continuous irrigation. But they are all troublesome and require the highest grade of intelligence and diligence on the part of the nurses and for these reasons are not always to be depended upon. I believe the bleeding is less but not very noticeably so, with the kephalin-coated catheters after the technique of Howard Cecil; certainly the febrile reaction is not lessened. There are again quite a few cases in which neither a Young's Punch—nor any other non-flexible metal instrument—can be introduced through the bladder neck from the meatus without using blind force and consequently producing false passages or dangerous tearing. I have been unable to find any reference in the literature to an open operation with Young's Punch. Even MacGowan, who was the first to use this open method and continues to do so in a limited number of cases and who is a strong believer in it, has published nothing about it except an occasional casual reference in other papers.

I think that we may conservatively say there are just four feasible and successful methods of treating bladder neck contracture of median bar.

1. First—and widely useful—Young's Classic Punch operation through and intact bladder and urethra.

2. MacGowan's Modification with the bladder opened supra-pubically or an incision through the prostatic, membranous, or bulbous urethra (usually the prostatic).

3. Bugbee's High-Frequency method.

4. A method devised by the author was described and cases reported at the 1915 A. M. A. meeting and published November 20, 1915 in the Journal of the A. M. A. This has a quite limited application. The conclusions drawn at that time, I believe, are sound. While the technique then was somewhat crude, the development of special electrodes has, in selected cases, made the procedure rather simple and precise for an experienced urologist.

To discuss in brief these procedures seriatum, too much can not be said for the unmodified Young's operation in properly chosen cases when performed by experienced urologists who have learned to avoid its dangers and pitfalls.

The open operation of MacGowan is more precise, avoids some of the dangers of the original method, accomplishes a most thorough removal of all obstruction, and insures a comfortable and safe convalescence by reason of the suprapubic (or occasional perineal) drainage.

Some years back I saw three cases of bladder neck contracture without any objective signs of stricture in the anterior or membranous urethra which offered no obstruction whatever to the punch until well into the posterior urethra. Repeated trials, after careful alypin anaesthesia, at introducing an 18 cystoscope—both convex and concave sheaths—were failures. Yet when these men were under spinal anaesthesia, opened supra-pubically, the hard fibrous ring dilated somewhat with the index finger, then depressed with the finger still in the bladder neck, the punch could be introduced with the other hand fairly easily. These were comparatively young men and are all perfectly well today and have no residual. I have seen also, a considerable number of cases diagnosed as perineal stricture where there was only slight stricture or none at all and operated perineally. The posterior urethra nearest the bladder neck was extremely coude. Many of these were operated by general surgeons who did not recognize the bladder neck condition. Some of these patients had had an external urethrotomy—one as many as seven. The punch with the open method effected a practical cure in all. Of course an external urethrotomy only, was a very simple procedure by any surgeon—since a large guide went well past the membranous urethra—but the operations afforded little or no relief from the symptoms. Any of these cases probably had only slight stricture at first; but rough instrumentation and the making of false passages had produced them. The old idea, that practically all cases of bladder-neck contracture take a sound or other metal instrument easily, I believe is erroneous. One sees many cases from 33 to 40 years old—usually consulting one for relative impotence—

which show a very coude posterior urethra making it often a tedious, distressing and difficult procedure to introduce even a small number 18 cystoscope or such an easily introduced instrument as the Geiringer urethroscope with the Luys Obturator. These cases had not as yet had any residual or if so it was not constant. But I cannot avoid the feeling that these are cases of prostatism sans prostate in the making. They are greatly benefited by dilatation particularly if this is produced by a cystoscope or any instrument which when well in the bladder is a straight instrument, thus depressing the bar. The residual when present often disappears for a considerable time following a few examinations or dilatations.

In my clinic at the Los Angeles County Hospital I have found it expedient for both the patient and the operator to have the Resident Urologist perform a suprapubic cystotomy with dePesser drainage in cases of impassable stricture in men 45 to 55 years of age, when a bladder-neck condition is suspected. Then in a few days we do an external urethrotomy over a retrograde staff. If bulbo-membranous stricture is present an external urethrotomy just anterior to it is done over any ordinary staff. These two are connected, it then being usually easy to find the line of cleavage between the adherent walls, a punch operation if necessary being done through the perineal opening with a finger or two in the bladder suprapubically as a guide. One is amazed at the rapid convalescence, quick recovery and lasting results of this operation. It may well be done at one sitting if one is fairly sure of the kidney function; but an acute partial or total retention that is not capable of being relieved by a catheter makes this uncertain and one must depend on the blood creatinin, blood urea or total non-protein nitrogen. Reliable data on these procedures is not always available at public hospitals.

Doubtless many readers will criticize the extra incision; but it stands for postoperative comfort, precise correction of pathologic condition and really for a shorter convalescence. Many of these cases —in fact most of them—in both private and County Hospital practice have been instrumented ad libidum by their own physician before going to the hospital and later by an intern in the hospital, with perhaps a beginning hematoma in the perineum. A perineal urethrotomy under such circumstances is usually an operation done in the dark; whereas a retrograde is quick, sure and exact, causes no unnecessary trauma, tearing, or false passage.

Let me repeat that this method of combined suprapubic and perineal incision is chosen only in cases of impassable stricture where a bladder neck contracture is suspected.

About four years ago I was called in an emergency to operate on a man thirty-five years old, already in the hospital with acute retention. He had had intermittent retention for several days. The night previous a metal catheter had been forced into the bladder under chloroform anaesthesia. All sorts of catheters and filiforms refused to go. On the operating table I injected the urethra with methylene blue solution. A Young's perineal exposure was then done and an opening made in the prostatic urethra. I could insert nothing into the bladder—filiform, the finest flexible silver grooved director, small Kelly sounds nor Young's director sound. A suprapubic opening was immediately made and with a finger in the bladder the reason for failure below was very apparent—the internal meatus pointed in the general direction towards the abdominal wall but slightly curved so that it pointed rather towards the pubic bone. It was hard and firm as cartilage. With the greatest effort finger dilation allowed the punch to enter from the perineum. He was thoroughly punched, made a quick recovery and takes a large sound as easily today as a normal urethra and then only at intervals of months for insurance. Several other cases in private practice presented similar difficulties and the results were all good.

At the County Hospital one sees many of these cases if he is wide awake and they are not infrequently complicated by a real stricture of the smallest caliber at the bulbo membranous junction. They are not for the most part cases of simple bar, but hard cartilage—like unmistakable contractures that require the greatest force with the index finger to dilate, and then only with counter-pressure in the perineum. Such cases are usually urethrotomized externally and the neglect of the contracture accounts for many failures after external urethrotomy. In the old days, fifteen to twenty or more years ago, when an external urethrotomy was followed by dilation with the finger, Palmer or other uterine cervical cilators or incision of the bladder-neck floor with a Blizzard, accounts for many otherwise unsatisfactory results.

These cases reported have all been very carefully studied and were neither carcinomatous, prostatic hypertrophy nor imaginary contractures. Of course our number at the County Hospital has been considerable—but one must remember that it is the second or third largest hospital in America and gathers many derelicts from the East as well as from the West.

I invariably do the punch operation at the County Hospital by the open method—almost always with a suprapubic opening. In private practice if a patient is not a first class risk as to lungs, heart, kidneys, or if he is a sensitive high-strung man and cannot stand pain I much prefer the open operation. In the strong robust laborer, artisan or phlegmatic man the original punch operation of Young through an intact urethra and a closed bladder, is the procedure of choice.

Bugbee's Cautery method has its very decided advantages and disadvantages. Recurring epididymitis, hypersensitive posterior urethras from inflammation, trauma or individual tendency to urinary fever offer barriers to its use. It is surprising, however, how much of a furrow may be produced

at a few sittings with a Bugbee's High-Frequency Electrode. The bleeding from the separation of the slough is seldom sufficient to be troublesome. But occasionally the bleeding and the bladder-neck site of the burning is often distressing since several sittings are usually necessary. It is seldom necessary to go to bed as there is little or no bleeding. The most annoying objection is that a percentage develop epididymitis and occasionally urinary fever which we believe to be a septicemia.

The author's method is a procedure precisely the same as the original punch operation except that the bar projecting into the fenestrum of the punch is needled with a small specially insulated electrode much after the manner of electrolysis of a wart or mole but using high-frequency current—d'Arsonval—being used to cook it and prevent the bleeding after it is punched away. After it is cooked, one must punch it out in order to remove the punch. The external reflected light (a Young's Light Carrier) is obviously necessary to see where one is needling. Moreover a good electric suction pump is highly essential to keep the field dry and do away with reflected light. The needled end of the electrode is parallel with the punch just as an ordinary electrolysis needle is inserted parallel with the skin. It is not only unnecessary but very harmful to continue this too far as the cooking is rapid and may extend too deep—much deeper than the bar. This method is useful in those with thin bars—in which wide-spread burning is unnecessary. It is I believe the simplest and best procedure for post-convalescent removal of small obstruction which we all occasionally have, such as tags of capsules, small pieces of prostate adhering to the bladder-neck or any small piece of prostatic tissue overlooked at the time of operation and producing a shelf or otherwise causing slight residual. It may be used to remove these pieces of redundant tissue at the posterior site, laterally or anteriorly. In the latter case the fenestrum of the punch must be rotated clear to the top, depressed very strongly and pulled upon until the teeth catch.

The so-called trap-door obstructions arising from the anterior portion of one or both lateral lobes or, as some believe, from the anterior lobe, were at one time dealt with by prostatectomy—if the gland could be shelled; or if not by rongeuring it through a suprapubic opening. Unquestionably the best way is by punching through the urethra with the bladder open suprapubically and the punch rotated 180 degrees (that is inverted) and the fixing of the tissue in the fenestrum under digital guidance. If it is small the author's High Frequency method may be used through the urethra with an intact bladder.

In conclusion I may state that having personally used one or the other of the above procedures in nearly forty cases, if it were necessary to have a punch operation on myself and a good deal of punching was required, I should choose the open operation because of an easy convalescence, a thorough and concise removal of obstructions and avoid the high temperature and tenesmus that are not entirely without significance.

## THE LAY ANAESTHETIST.*

By WALTER R. CRANE, M. D.

At a recent meeting one of our members read a paper entitled "The Lay Radiographer," a paper that was clean cut and to the point, and that the radiographic situation in Los Angeles certainly called for. A similar condition exists to embarass and lower the efficiency of the anæsthetist, and I wish tonight to call your attention to the Lay Anæsthetist, who is not licensed to practice medicine or surgery in this state.

At the present time any one who has a little knowledge and a colossal nerve may give anæsthetics, provided he finds a surgeon who is willing to accept the responsibility for the anæsthetic in addition to his own responsibility for the operation. Unfortunately our state medical practice act is no more definite with regard to anæsthetists than it is to roentgenologists.

There are certain qualifications which every one who gives anæsthetics should possess:

*First*—The anæsthetist should have had a thorough training in medicine and surgery.

*Second*—The anæsthetist should have had a special training in the giving of anæsthetics, either in a hospital or elsewhere.

*Third*—The anæsthetist should have the general qualifications that are developed by the above training,—knowledge, experience and confidence; tact and patience in handling the patient; cool judgment in time of need. He should be cautious for his patient's welfare, but not afraid to keep his patient in the proper stage of anæsthesia. The anæsthetist should accept the responsibility for the patient's life, knowing that he is competent. He should act on his own initiative for his patient's welfare, regardless of advice from the surgeon or bystander. He should understand the patient's condition and the shock to be expected from the operation. He should choose the anæsthetic to be used and the preliminary medication. He should consult with the surgeon as the case requires and advise as to the patient's condition during the operation.

W. W. Keen, a surgeon of wide experience and international fame has said, "Next to the surgeon and even before the first assistant, stands the anæsthetist, holding the scales of life and death."

The trained anæsthetist recognizes a complication and knows the treatment.

All this and more is gained only by a full medical and hospital training, a training that at the best is none too thorough for the responsibility involved, and I would speak for raising the standards of education for the anæsthetist rather than lowering them.

The relation that the anæsthetist bears to the patient is analogous to that of the surgeon. The life or future well being of the individual may be jeopardized through the carelessness or ignorance of one or the other.

It is obvious that a layman cannot be trained to take the place of a physician without endangering the patient, and it is equally patent that the meager medical and surgical training that a nurse receives does not qualify her to give anæsthetics, except in case of emergency.

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